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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TEKLE, DANIEL T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,538	Applicant(s) AGNIHOTRI ET AL.	
	Examiner DANIEL TEKLE	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 11-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-7 and 11-27 rejected under 35 U.S.C. 102(b) as being anticipated by Dimitrova et al. (US 6,100,941).

Regarding Claim 1: Dimitrova et al. discloses a method for summarizing at least one multimedia stream (101,102), the method comprising: a.) one of receiving and retrieving said at least one multimedia stream (101, 102) comprising video, audio and text information (**column 2 line 10 to column 3 line 59**); b.) dividing the at least one multimedia stream (101,102) into a video sub-stream (303), an audio sub-stream (305) and a text sub-stream (307) (**column 2 line 10 to column 3 line 59**); c.) identifying video, audio and text key elements from said video (303), audio (305) and text (307) sub-streams, respectively (**column 2 line 10 to column 3 line 59**); d.) computing an importance value for the identified video, audio and text key elements identified at said step (c) (**column 2 line 10 to column 3 line 59**); e.) first filtering the identified video, audio and text key elements to exclude those key elements whose associated importance value is less than a pre-defined video, audio and text importance threshold, respectively (**column 2 line 10 to column 3 line 59**); and f.) second filtering the remaining key elements from said step (e) in accordance with a user profile (**column 2**

Art Unit: 2621

line 10 to column 3 line 59); g.) third filtering the remaining key elements from said step (f) in accordance with network and user device constraints (**column 2 line 10 to column 3 line 59**); and h.) outputting a multimedia summary (120) from the key elements remaining from said step (g) (**column 2 line 10 to column 3 line 59**).

Regarding Claim 2: Dimitrova et al. discloses a method of Claim 1, wherein said at least one multimedia stream (101,102) is one of an analog and digital multimedia stream (**Fig. 2 element 64**).

Regarding Claim 3: Dimitrova et al. discloses a The method of Claim 1, wherein the step of dividing the at least one multimedia stream (101,102) into a video sub-stream (303) further comprises the step of identifying and grouping said at least one multimedia stream (101, 102) into a plurality of news stories (330) where each identified news story (330) is comprised of an anchor portion 30 (311, 312) and a reportage (32 !, 322) portion (**column 2 line 10 to column 3 line 59**).

Regarding Claim 4: Dimitrova et al. discloses a method of Claim 1, wherein the step of dividing the at least one multimedia stream (101,102) into an audio sub-stream (305) further comprises dividing said at least one multimedia stream (101,102) into a plurality of equal-sized frames (306) of a fixed time duration (**column 2 line 10 to column 3 line 59**).

Regarding Claim 5: Dimitrova et al. discloses a method of Claim 1, wherein the step of dividing the at least one multimedia stream (101, ! 02) into a text sub-stream (307) further comprises dividing said at least one multimedia stream (101,102) into a plurality of frames (308) wherein each frame of said plurality of frames is defined on a word

Art Unit: 2621

boundary **(column 2 line 10 to column 3 line 59)**.

Regarding Claim 6: Dimitrova et al. discloses a method of Claim 1, wherein the act of identifying video, audio and text key elements from said video (303), audio (305) and text (307) sub-streams further comprise the acts of: 1 .) identifying low (510), mid (710) and high level (910) features from the 15 plurality of frames which comprise said video (303), audio (305) and text (307) sub-streams **(column 2 line 10 to column 3 line 59)**; 2.) determining an importance value to each of said extracted low (510), mid (710) and high level (910) features from said identifying act **(column 2 line 10 to column 3 line 59)**; 3.) computing a frame importance value for each of said plurality of frames which comprise said video (303), audio (305) and text (307) sub-streams as a function of the importance values of the feature importance values determined at said determining act **(column 2 line 10 to column 3 line 59)**; 4.) combining the frames into segments in each of said video (303), audio (305) and text (307) sub-streams **(column 2 line 10 to column 3 line 59)**; 5.) computing an importance value per segment for each segment from combining act; 6.) ranking the segments based on said computed importance value at said computing step **(column 2 line 10 to column 3 line 59)**; and 7.) identifying key elements based on said ranked segments **(column 2 line 10 to column 3 line 59)**.

Regarding Claim 7: Dimitrova et al. discloses a method of Claim 6, wherein said act (3) of computing a frame importance value for each of said extracted low (510), mid (710) and high level (910) features further comprises computing said importance value by one of deterministic, statistical and conditional probability means **(column 2 line 10 to**

Art Unit: 2621

column 3 line 59).

Regarding Claim 11: Dimitrova et al. discloses a method of Claim 6, wherein said step (4) of combining the frames into video segments further comprises combining said frames by one of family histogram computation means and shot change detection means **(column 2 line 10 to column 3 line 59).**

Regarding Claim 12: Dimitrova et al. discloses a method of Claim 6, wherein said step (4) of combining the frames into audio segments further comprises the steps of: categorizing each frame from said audio sub-stream (305) as one of a speech frame, a music frame, a silence frame, a noise frame, a speech + speech frame, a speech + noise frame and a speech + music frame; and grouping consecutive frames having the same categorization **(column 2 line 10 to column 3 line 59).**

Regarding Claim 13: Dimitrova et al. discloses a method of Claim 6, wherein act step (4) of combining the frames into text segments further comprises combining said frames based on punctuation included in text sub-stream (307) **(column 2 line 10 to column 3 line 59).**

Regarding Claim 14: Dimitrova et al. discloses a method of Claim 6, wherein said step (5) of computing an importance value per segment further comprises averaging the frame importance values for those frames which comprise segment **(column 2 line 10 to column 3 line 59).**

Regarding Claim 15: Dimitrova et al. discloses a method of Claim 6, wherein said step (5) of computing an importance value 15 per segment further comprises using the highest frame importance value in said segment **(column 2 line 10 to column 3 line**

Art Unit: 2621

59).

Regarding Claim 16: Dimitrova et al. discloses a method of Claim 6, wherein said step (7) of identifying key elements based on said rankings further comprises identifying key elements whose segment ranking exceeds a predetermined segment ranking threshold **(column 2 line 10 to column 3 line 59)**.

Regarding Claim 17: Dimitrova et al. discloses a method of Claim 6, wherein said step (7) of identifying key elements based on said rankings further comprises identifying key elements whose segment ranking both exceeds a predetermined segment ranking threshold and constitute a local maxima **(column 2 line 10 to column 3 line 59)**.

Regarding Claim 18: Dimitrova et al. discloses a method of Claim 6, wherein step (7) of identifying key elements based on rankings further comprises identifying key elements whose segment ranking constitutes a local maxima **(column 2 line 10 to column 3 line 59)**.

Regarding Claim 19: Claim 19 reject for the same subject matter as claim 1.

Regarding Claim 20: Dimitrova et al. discloses a system of Claim 19, further comprising a user preference database (117) communicatively coupled to said UPF module (113) for storing user profiles **(column 17 lines 50-60)**.

Regarding Claim 21: Dimitrova et al. discloses a system of Claim 19, wherein the first external source (110) is a broadcast 25 channel selector **(column 5 lines 12-19)**.

Regarding Claim 22: Dimitrova et al. discloses a system of Claim 19, wherein the first external source (110) is a video streaming source **(Fig. 11)**.

Regarding Claim 23: Dimitrova et al. discloses a system of Claim 19, wherein said at

Art Unit: 2621

least one multimedia stream (101,102) is one of an analog and digital multimedia stream (**Fig. 4 element 64**).

Regarding Claim 24: Dimitrova et al. discloses a system of Claim 19, wherein the NADC module (115) is communicatively connected to an external network (122) coupled to a user device (124) (**Fig. 11**).

Regarding Claim 25: Dimitrova et al. discloses a system of Claim 19, wherein the network (122) is the Internet (**column 5 lines 12-18**).

Regarding Claim 26-27: Claim 26-27 reject for the same subject matter as claim 1 and 6 respectively.

Regarding Claim 8-10: Claim 8-10 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL TEKLE whose telephone number is (571)270-1117. The examiner can normally be reached on 7:30am to 5:00pm M-R and 7:30-4:00 Every other Friday..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/Daniel Tekle/
Examiner, Art Unit 2621